

THE
TRUE ART OF HEALING:
A DISCOURSE
ON THE
RATIONAL SYSTEM
Of Medicine,

INTRODUCTORY TO THE WINTER SESSION AT ST. MARY'S HOSPITAL.

Delivered October 1st, 1856,

BY
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DIGESTION AND ITS DERANGEMENTS.

The Principles of Rational Medicine

APPLIED TO

DISORDERS OF THE ALIMENTARY CANAL.

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I HAVE before me a mixed assembly, composed partly of those just beginning their preparation for a medical life, partly of those who have been some time actively engaged in it, and partly of educated persons, interested indeed in our departments of human knowledge, but intending neither to study their details nor to apply them to practice. In anticipation of such an audience, I have selected a subject which, applying specially to no one of these classes, might yet be not without use and interest for all. I am going to examine, impartially I believe, conscientiously I am sure, the primary leading ideas of the Art of Healing—those data, the assumption of which enables us to claim our livelihood from the public, and induces them so to reward us for our work. We are called “*doctores*,” “teachers;” we profess to teach men how to avoid certain states of pain, which are found not only to be *dis-eases*—that is, want of ease or comfort—but are known also to shorten life. This then is our profession, our solemn engagement: how far are we able to fulfil it? Are the bodily pains of mankind less and their lives longer through our interference? or do we merely give mental comfort, by taking off the mind of the invalid the weight of thoughts about the body? Is in fact our daily work a reality, or a pious fraud kept up for its convenience to both parties?

It might seem to the superficial observer a work of

supererogation to give any reasons for believing it a reality before an audience whose very presence seems to show their entire agreement. Yet we hear clergymen, judiciously I think, frequently insist upon the evidences of Christianity before Christian congregations, and the proofs of mere natural religion are made part of the education of those who have already assented to its highest doctrines. Unless acknowledged truths are either questioned or reiterated, they are apt to become paralytic, like unused limbs; their imprints on our minds become fainter, and they cease to influence with due vigour our acts or thoughts. *The result is a careless, lazy scepticism.*

Scepticism, in practical medicine, displays itself in various ways. Sometimes it produces merely a reluctance to do the duties we undertake as professional men. The evidence is received, cannot be denied, yet is not felt sufficiently strongly to make the acting upon it easy to a conscientious mind. Such a sceptic was a distinguished university professor of physical science, who, not long ago, expressed to a friend of mine his wonder that medical men could ever "know enough to prescribe at all:" such was Dr. Young, the great mathematician and astronomer, the interpreter of Egyptian hieroglyphics, who used to hurry round his circle of patients at St. George's, at hours when no student was present, ashamed of being seen to prescribe; such was Dr. Robert Williams, an agreeable and accomplished companion, so well informed in modern history, that he is stated to have been able to describe the plan of every battle of modern times; yet, partly from preoccupation of mind with things foreign to science, and partly from constitutional sluggishness, unimpressed with the importance of the art he professed, so as to

be described by his biographer as having “little faith in physic”* and notoriously difficult to drive into writing a prescription. The scepticism here is rather in action than in opinion,—the truth of the evidence is allowed to have its weight, but not to produce the due practical results. It is an unfortunate disposition of mind, and one most fatal to usefulness in our walk of life.

But more commonly want of earnest faith in the real truths of medicine exhibits itself in a hasty instability and wavering indecision—in a confusion between opinions and facts, mistaking the one for the other, and acting with equally lukewarm confidence on both. To the superficial observer the mind appears simply over-credulous and too apt to be led away by new and unwarranted views. On deeper inquiry however its fault will be found to be that it does not put sufficient credit in what is really deserving, and hence ranks together as equal guides to action that which ought to be morally certain, and that which is barely probable. The defect is not that the motives are all equally strong, but that they are all equally weak. Such men count opinions instead of weighing them, think more highly of an intricate argument than of common sense, love that which is distant and farfetched, and “prize a crumb of foreign praise above a loaf of English commendation.” They are often exceedingly dogmatic, but for want of a firm basis quickly change; and their practice, though too active in many instances, is wavering and inconstant. They heap together a world of remedies, and do not give one time to act before they change it for another.

Many indiscriminate half believers lay claim, before

* See the obituary notice of Dr. Williams in the annual oration before the Medical and Chirurgical Society, by the President for 1845.

their patients, to an infallibility and intuition of diagnosis which any educated person sees to be a mere mask. They are never wrong, never hesitate, difficulties and discrepancies they never see, and can scarcely be brought to admit that they ever mistreated or lost a single patient. A few years ago, a young physician was severely taken to task by an ancient practitioner for requesting to see a second time a patient before a diagnosis could be given. "This will never do," he said; "you must always be positive—never mind being wrong, so that you are positive."* It cannot be surprising that the public discover the want of real earnestness in such advisers, and hence that many falling into their hands are justified by individual experience in having "little faith in medicine."†

It is the frequency of want of confidence in his data, and the consequent grounds for disrespect for those data, that diminishes a medical man's weight in society so much below what it otherwise would be; while the clerical and legal professions, whose belief in their principles is undoubted, are able to acquire due weight, are better paid, more respected, and therefore more independent and gentlemanly in manners than we are.

How shall we remedy this evil? That is, how shall we do our part in remedying it? For I am a greater believer in the power of individual reform than of corporate reform.

To strike at the root, we must go back to first principles. The reason why our social position is beneath that of other professions, is because the public suppose that the art of medicine is based upon conventional rules and mere

* See Dr. Aeland's speech at Newcastle.

† A gentleman employed by the *Saturday Review* makes this statement concerning the public in general; so we may suppose it to be true of his own acquaintances.—See *Saturday Review*, April 12th, 1856.

opinion, and that the practice of it is a matter of memory rather than of logical argument. Naturally they conclude that very limited powers of mind are required to be even a successful medical man. Now, the origin of this supposition is, I am sorry to say, the conduct of too many of our brethren, who encourage their patients and acquaintances in these misguided notions, and indeed follow the multitude themselves. A large number of those we daily meet seem to have no idea that there is anything real or earnest in the art they profess—nor in truth is there in the way they profess it.

I am bound to say that this reproach lies rather against the bulk of our body than against those who have attained a high position in it. These I have always found to act with earnestness and vigour, and to have evidently a strong belief in the principles they act upon. Yet are they to blame, for their teaching has not tended to raise up successors to themselves, but rather to make their pupils slaves to dogmatism, convention, and tradition.

The remedy, then, I conceive to lie in a bold, free, and frequent examination of the foundations on which rests the superstructure of our art. Let us impartially inquire, and lead our students to inquire, how far the grounds for each step we take are reasonable or merely traditional. To acquire that faith which is evidently so important to our success, let us first make sure that we have something to believe in. Let us make sure that there is such a thing at all as an art of healing, and try to get a clear notion of a systematic first principle on which, if true, it must be based.

A first principle is a great strength, and a name is a bond of union which even supplies the place of strength. The Homœopathist has a name expressive of the assump-

tion which guides his practice, that physical agents will remove the like evils that they cause ; the Hydropathist professes in his name to cure by water alone ; the Kinesiopathist (or, as he is called in the United States,* the *Motorpathist* !) that motion will remove all disease ; the Mesmerist, that he has faith in Dr. Mesmer's practice.— Why should we be nameless ? “ *Fas est et ab hoste doceri* ;” and I think it not amiss to adopt the name of the RATIONAL SYSTEM for the medicine which will yearly more and more be taught in the schools of Europe. The name is expressive of its dependence on reason, that is on the common sense which guides our steps in other affairs of life.

The basis of the Rational System is, that *the best guide to medical treatment is the physiological observation of the body in health and disease, and of the action on it of external agents.*

And hence, that *the true mission of the medical profession is to find what are the essential changes in the vital functions presented by cases of disease, and also the essential changes in the vital functions effected by agents in our power, and to counteract the former changes by the latter.*

When a man sees, as he cannot fail to do, that various physical powers act strongly on the organism, that heat and cold, moisture and dryness, positive and negative electricity, food and abstinence, various and opposite sorts of drugs, may be made instruments of pain and shorteners of life, he may logically aspire to prevent pain and protract life by the proper regulation of them, by the increase or

* See advertisement in *National Anti-Slavery Standard*, August 16th, 1856.

diminution now of one, now of another. That which modifies vital action when it is met with as an accident, will do so equally when it is deliberately inflicted. The poisonous herb which purges a man to death, will purge him less violently when given in smaller quantities ; and if he is dying for want of a purge, will save his life. This is so obvious, that I will waste no more words in illustrating the proposition, that to observe the action of physical agents on disease, may enable us to use them in such a way as to prolong life.

But why do I say “the physiological observation of the body in *health?*” Are not health and disease opposed to each other? Do we not make separate studies of physiology and pathology? And consequently while the man of science for its own sake is engaged with the normal state, is not the morbid alone the true business of the medical man? And does not that show that one set of phenomena is exhibited here and another there?

No, it is not so. I hold it an error fatal to the usefulness of our profession to do or to say anything capable of fostering the idea that the organic laws of health and disease are different, or still worse, that they are in opposition. On the modern principle of the division of labour we have separate lecturers on physiology and pathology and on the practice of medicine, but all opportunities should be taken to inform the student that they are merely continuations of the same subject, the study of the nature of man with a view to his greater physical comfort. No one of them has a right to arrogate to himself the teaching of our art, any more than the shepherd, or the manufacturer, or the dyer, or the tailor can lay a sole claim to the adornment of our backs.

The identity of the organic laws of health and disease will be made evident by putting to yourselves a few cases. A man has his skull fractured and a piece of bone presses in upon the brain—he lies in a state of coma. Or a blood-vessel in the head is too weak or brittle for its work—it breaks, and a clot of blood which has escaped presses on the brain in the same way as the piece of skull, and the patient falling down in an apoplexy lies in a similar comatose state. Now coma and apoplectic fits are certainly diseased conditions; yet it is as much in accordance with man's nature—as truly physiological—that he should be comatose when his brain is pressed upon, as that he should be hungry when he has been long without food. A cook in skinning a hare poisons her hand; the master eats the hare without harm. It is as much a part of the nature of blood, and dependent on the same series of organic laws, that it should cause inflammation and swelling when the poison of the freshly killed animal is introduced into its circulation, as it is that it should carry the same animal matter as nutriment from the bowels to the tissues. It is a *normal quality* of skin that it should blister when boiling water is poured on it, that it should exhibit pustules when supplied with blood containing small-pox virus, or venereal sores when scratched with syphilitic poison. Its condition is artificial, exceptional, *abnormal*, when it does not do so.

The identity of the laws of physiology and pathology may also be shown by the impossibility of drawing a defined line between health and disease in chronic cases. All persons after a hearty meal feel indisposed to exercise, and have a sense of fulness and weight in the epigastrium, some more and some less. One man feels gradually a little more and a little more of this languor, until at last it incapacit-

tates him from his business. Can he or his medical adviser fix the day when he began to be ill, or say when his symptoms ceased to be normal and became "dyspeptic"? Enlargement of the heart is a disease. But how can we call the minor degrees of enlargement morbid states, when we least see them existing at all ages without producing the symptoms, and in old age find them to be the rule?*

No new modes of nature's acting are brought into play by disease. Its chemistry is the organic chemistry of health, exhibited under altered circumstances; the same mechanical laws are called into play in the two states; the relations of the physical and spiritual world are the same; a changed mind acts, indeed, upon a changed body, but in obedience to the same laws.

For example, a patient's urine is found to deposit a white, chalky substance, which chemists detect to consist of phosphates of lime, magnesia, and ammonia. A superficial observer might say, here is a new substance which is not in normal urine; but the physiologist steps in, and shows that such is not the case; the phosphates are all present in healthy urine, even more plentifully than in the case before us, only they are not seen because dissolved by an acid; and the *absence* of that acid, not the *presence* of the phosphates, is the real failing.

Or take an example from the anatomical mechanics of the body; the superficial veins of the legs swell and become "varicose," as it is technically termed, or those of the lower end of the bowels expand into what are called "piles." This is no new power developed in them: the tendency to dilate, in obedience to the laws of gravity and hydrostatics,

* For further illustration, see *Digestion and its Derangements*, by the Author, Book II., chap. i., page 272, *et seq.*

is always present in healthy veins, but is counteracted by a certain degree of elasticity and cohesion. It is the loss of these powers that gives rise to the inconvenience.

So, also, delirium, hysteria, mania, or mesmeric trance, are not exhibitions of what was previously non-existent, but the removal of the balancing and controlling powers of mind : just as dreaming and sleep-talking occur when the spirit ceases to exert its waking powers.

Numerous other instances will occur to the practitioner, and will be shown to the student in the lectures he is entering upon, of such simple nature as easily to be understood, where disease as evidently consists in differently-balanced vital functions. That balance of vital functions which is convenient for the uses we put our bodies to is called health or ease, that which is inconvenient, bad health or *dis-ease*. There are no new functions to be studied, but simply varied relations of familiar ones to be viewed in their consequences.

An apparent exception to what has been said is where there grows, as a part of the body, a formless substance, useless and destructive to life, but still organically connected with, and produced out of, the living frame. Tumors, cancer, and tubercle, exhibit something like the development of a new power in the tissues of the body which does not exist in the normal state. Yet when we reflect that their very formlessness, their unlikeness to the existing tissues, is evidence of the deficiency of the most important quality in growing flesh—the quality of taking a definite external shape—they are hardly a valid exception. Are they not living tissue, half-arrested in its progress to full life ?*

* I pass over as untenable the idea that cancer and tubercle are parasitic germs implanted in the body from without. It is disproved

It simplifies the question, also, to remark that the destruction of convenient balance in the powers of life, which is disease, consists in the deficiency, that is, the temporary or permanent subtraction of power, and not in its increase or addition.

A fallacious exception is presented by the naming of certain states of organs “hypertrophy” or “overgrowth.” They do not, however, answer strictly to their name. Either they are deficiencies of normal consumption, as is the case in obesity, or they are peculiar adaptations to peculiar work, as in the enlarged arm of the blacksmith, which the man benefited would not call either an excess or a disease; or they represent augmented weight and size from the addition of imperfect tissue. This last case is very common, and occupies a considerable space in our treatises and atlases of morbid anatomy, from the variety of tissues liable to be so affected. But in point of fact it is a complete misnomer, and often from the beginning, and always before death, deserves rather to be called “atrophy,” or “under-growth.” For instance, in an enlarged heart there is less muscle available for the purpose of contraction than there ought to be. Examined by the microscope, the great bulk of its fibres are ill-formed and inefficient. There is less real heart than in a healthy man. So, too, a *soi-disant* hypertrophied kidney may be three times the size of a healthy one, without having half as much real glandular substance capable of doing the true work of a kidney,

by the degrees of likeness and unlikeness to existing tissues which they exhibit. A tape-worm, a ring-worm lichen, a *sarcina ventriculi*, has either its specific form, or it is nothing of the sort. Whereas tumours are truly said to be “more or less” cancerous, and every gradation is found between healthy tissue and malignant cells, between healthy mucus, pus and tubercle;—no absolute line can be drawn between them.

of separating urea from the blood, and stopping the exudation of serum.

What, then, results? Is it not evident that the best mode of arriving at a knowledge of the *deficiency* of vital powers, or disease, is a knowledge of those powers of which it is a deficiency, or physiology? And does it not result from that, that a test of the action of a remedy on the diseased body is its action on the healthy body? and that the most likely way of advancing the art of healing is by investigating the essential physiological effects of remedies?

The course of reasoning our minds follow in treatment should be as follows:—Certain deviations from the usual course of bodily phenomena distress an individual. There must be an exciting cause of these, a something external to originate them; so the presumption is, that by modifying external circumstances, there is a possibility of doing good, so far at least as is involved in the prevention of the continuance of the exciting cause. To quote the simplest possible example;—if a man is suffering from the effects of cold, we may prevent further injury from that cold by warm clothing. This is the simplest possible medical treatment—the *PREVENTIVE*.

But the deviation from the healthy state may, when once started, tend to continue. A man has burnt his hand; and putting out the fire does not remove the pain, swelling, and blister. This is the more common case, and in fact is the state of things to which, as a rule, we are called upon to administer. The unhealthy state is a vital physiological process, a part of the nature of the animal body, consequent indeed upon the exciting external circumstance, but not ceasing when it is removed. What must be our

treatment here? Well—we reason in this way. We may do good, we say;—

(1st) By so modifying external circumstances that the diseased condition causes less inconvenience. We apply a new state of things to a new state of body. In the instance quoted above, of a burn, we find that the atmospheric air, the fresh dancing breeze that gives life and pleasure to all healthy creation, is an exquisite torture to the burnt skin: so we simply—keep it off. We cover up the bared part in cotton wool.

We may also do good—

(2ndly) By so modifying external circumstances that the diseased condition receives no fresh stimulus, no new cause. Thus, the cotton wool not only checks pain, but it also prevents the air from being a source of inflammation.

(3rdly) We may start in the body antagonistic processes, opposite to those which are noxious. Thus we may modify the heat of the inflammation in the burnt part at a later period by doing that which assists it in parting with its heat, which cools it more rapidly than natural—that is, by applying evaporating lotions. Or, seeing that the raw surface is over-sensitive, we may apply to it articles which we know make flesh under-sensitive—alcohol, opium, &c. At a later period still we may check excessive secretion by what would cause in a natural mucous membrane an arrest of secretion,—for example, by washing it with nitrate of silver.

These modes of management include all that is *CURATIVE* in our art.

Besides this we have to consider that variations in vital processes may leave consequences behind them, that diseases may have *sequelæ*, and that it is our duty to provide for

these, causing as little inconvenience as possible after the disease is over. Our treatment with this intention may be called *PRESCIENT*.

We may, then, reasonably hope to benefit a sick person, by advising that which will either,—

- (1), *prevent*, that is, remove the cause of, his *disease*;
- (2), *relieve pain*, by accommodating the rest of the body (especially the sensitive nerves) to altered local circumstances;
- (3), *check morbid processes*;
- (4), *excite antagonistic processes*;
- (5), *make the consequences of the disease less injurious*.

Sometimes the following out of these indications are inconsistent with one another—sometimes, for instance, the checking of the morbid process increases future danger, as (*e.g.*) to stop a purulent discharge would increase fever, or the attempt to remove the cause adds a more dangerous consequence, as (*e.g.*) if one was to neutralize by caustic potash sulphuric acid accidentally swallowed It may possibly not be reasonable to follow out one of these indications, but to follow out any which does not come under these heads is unreasonable. Every remedy must have one of these intentions, and must go straight to its mark, or it is either hurtful or useless.

This is the RATIONAL SYSTEM, and these are its claims to be the true Art of Healing. A proof that adhesion to it is profitable to the profession at large, is the fact that all the universally-received modes of cures are in strict accordance with it, and that the universality of their use is dependent on that accordance. Cod-liver oil in phthisis, that is, the supply of a digestible fat where fat is wanted in the body—iron in anæmia, where the blood is deficient in

iron—elastic stockings for varicose veins, where the vessels have lost their elasticity—evaporating lotions where the skin is hot and dry, or has lost its habit of evaporation—wine in low fevers, to supply temporarily the nervous influence which is unequal to the work immediately required of it &c. &c., are familiar instances of remedies which everybody uses because he sees the reason of them, and which everybody would not use so freely if the reason of them were not so easy to understand. They are directly applicable on grounds ascertained by observation of the normal functions of the body.

For this cause should the study of physiology be made the chief object in that education which prepares for practical medical life : the courses of Anatomy, Chemistry, and others which are followed during the first student-years should be handmaids to it ; those of Medicine and Surgery should be exhibited as directly dependent, as suggestions for the application of its principles to practice. When bewildered by the labyrinth of apparently heterogeneous knowledge, into which the examining boards require you to enter, and frightened at the long list of professors, all will be clear, if you keep in your hand this clew—that the chief thing to be gained is *an insight into the functions of the human body*, and that the parts of each course of lectures are important in proportion as they help you towards it. So will order be introduced into the rather too bulky mass of information required.

This was not the original intention of those who introduced into medical education the classification of the knowledge demanded. Chemistry was of old taught the student in order that he might artfully combine and prepare drugs ; now-a-days, the functions of the animal organism not

only year by year fill up more and more of the course, but are made the keystone of the whole structure. The student was formerly required to learn botany, that he might go into the fields and cull simples. Still he is required to attend botanical lectures, but those lectures are made useful, partly as a logical exercise in classification, partly by exhibiting vegetable physiology as an introduction to animal. The old husks are indeed empty of what was once thought valuable fruit, but, instead of casting them away, we refill them with fresh pulp.

The application of the Rational system to practice consists in viewing each patient, not as a part of a class which is to be treated according to some regular pre-established rule, but as a separate example of disease—in treating *the individual* and not *the species*, as a logician would express it. As Dr. Huxham says, “each particular disease in every individual patient, is to be considered by the attending physician, not according to the *nomenclature*, but according to the nature, causes, and symptoms in that particular person.”*

For example, a patient is found affected with acute inflammation of the lungs:—you can hear the air finely crackling in the minute vesicles of the spongy tissue; at the same time you find, by striking the chest, that there is something more solid than the usual air there. What is this? Is it not one of the normal contents of the chest—blood—but in greater quantity than natural? Your conjecture is strengthened by finding bloody mucus coughed up with great effort, showing that it comes from a distance; part of the lung is evidently over-filled with blood, and that

* Huxham on Fevers, &c., p. 224.

part is the tissue most distant—namely, the net-work of small blood-vessels. What is to be done, then? Why you know that the heart is continually driving more and more blood into the place where there is already too much; you feel that the heart of this particular patient is acting with great force, and that the capillaries are elastic when relieved of over-pressure, as may be seen in the skin; and so you do what physiology teaches you will diminish the impetus of the blood column—you bleed quickly from the arm. Then you give antimony and opium, which you know also diminish, the first the strength, and the second the rapidity, of the heart's action; while the former drug is also known by physiological experiment to make the mucous secretions more watery, and so to aid the bronchi in emptying the over-filled vessels. Success justifies your treatment, and you are disposed to cast aside future physiological reasonings, and to treat every case of pneumonia in this way. But the next patient has with the same physical condition of lungs a weak, quick, trembling heart; the skin is either pale and damp, or livid and dry, showing the capillaries to be sluggish and inelastic; and this sluggishness of the capillaries is associated with torpor of the nervous action. Follow the rule you have made of bleeding and so on, and you diminish your patient's chance of life. But dry-cup him, so as to supply an artificial motion to the capillary circulation, give him wine to rouse a temporary nervous action, and trust to opium for diminishing the rapidity of the heart's movement without lessening its strength, and he stands as good or better chance of recovering than the first.

Mark now—here are two cases treated in exactly opposite ways, one with bleeding and lowering, the other with wine

and nutriment ; yet they are two cases of one definite disease— inflammations of the lungs, which to the eye of the morbid anatomist would present exactly the same appearance during the stage when treatment is useful. I select these instances, not as convincing evidence—for the evidence is cumulative, and to be found in every patient, if looked for—but simply as striking, familiar examples of how it is, not by the name of the disease, or the function or organ affected, or the way in which that function or organ is affected, that our treatment is to be guided, but by the general physiological condition of the rest of the body. By the correct observation of this, and appreciation of this, one medical man is made more successful than another.

The rival system to the Rational is Empiricism, or Statistics, or Experience, by all of which words the same form of logical argument is implied. The golden age of this system is drawn by Lord Bacon's vivid pencil as possessing a specific for every disease, so that the name should immediately without further thought suggest the appropriate remedy. Given the diagnosis A B, the treatment X Y should follow as a matter of course. Disease is to be classified into a number of species, and upon each species are remedies to be tried till it is found which is followed by comparatively the most successful results. For instance, if you made "pneumonia" a species of disease, you would observe the effects of doing nothing in ten cases, of bleeding in ten cases, and of wine in ten cases ; and if three patients died under the first treatment, three under the second, and only one under the other, you would use wine in all future cases of pneumonia. You argue that you have found for the specific thing pneumonia a specific thing, or remedy, which

enables 90 per cent. to recover; and till you find something which enables 95 or more to recover, you will continue to administer that thing. Though the tenth may possibly have been injured by the wine, yet the nine were benefited, and “the greatest happiness for the greatest number” should be your motto.

I have put the argument naked, in the best light, and allowed it to be possible to try impartially the thirty experiments, which all must see can very rarely be the case. But even then I hold that the public is not fairly dealt with by a practitioner acting on these principles. He can have no firm faith in his treatment, and is constantly haunted by the suspicion that the patient before him is the unfortunate tenth, who is to be injured thereby. Unless he is a very hard-hearted man, such a suspicion makes him irresolute and wavering.*

Even in its best light then the Empirical system cannot inspire confidence in a right-thinking logical mind. The clearer a man’s intellect is, with the less faith will he act upon the deductions. But how much worse is the case usually than I have represented it? Instead of having a complete series of contrasted experiments, a man is generally driven to draw his conclusions from a few instances which his memory, more or less good, paints as similar to the one before him. “I remember,” a man of so-called experience will say, “seeing such and such a drug do good in a case like this”—pneumonia—delirium tremens—fever, or

* The truth is, common sense makes him feel, what a logician would put into set terms—that he is doing business with a phantom; that *species* has no real existence, and he is behaving as if it had. A class of diseases is no more a thing than Goodness or Whiteness. It is a fiction of the understanding, not an object existing in nature, where the *individual* only is to be found.

the like,—and he will condescend to give no other grounds for recommending it. Do not be deceived by the pomposity of these Sir Oracles in consultation; if they cannot render a reason for their advice, be sure there is very little value in it.

A result of the Empirical system still more fatal to our good fame is *overdrugging*. A man has seen, or heard, or read of somebody else having seen various remedies being followed by beneficial results, so he rapidly “throws in” as much as he can of one in order that he may not be too late to try the second or the third ; or worse still, he mixes them all up together. He is like a sportsman who thinks to make sure of his bird by firing off both barrels at once, or double-shotting his gun.

It gives rise, also, to that dangerous habit of forgetting that drugs are as capable of doing harm as of doing good, that they are double-edged tools, quite as powerful in diminishing the chances of life as in increasing them. Hence a rashness in prescribing and in altering prescriptions, and a complete want of acknowledgment of the actual progress of nature towards cure. Hence an inattention to diet, climate, clothing, and a thousand more hygienic measures of more real importance than the united Pharmacopœias of Europe.

The public will not bear this. In spite of the confession that Hahnemann’s dicta are “ineffable nonsense,” educated persons go to homœopathists ; not from any belief in the system, but avowedly in order that they may give nature a fair chance by avoiding drugs. I have had this reason stated to me by those who, on proposing to insure their lives, have referred to homœopathists as their medical attendants. And I am bound to add that they appeared

generally prudent and judicious persons.* As far as my experience goes, I find disgust at overdrugging to be the chief influence that draws to the Hahnemannic camp. That its followers themselves have no confidence in the power of the system to prolong life is shown by the bankrupt condition of the Homœopathic Insurance Company, whose offices are now to let. Peculiar advantages were offered by this association to the supporters of Hahnemann, and had those advantages been justified by facts, the natural course of commerce would have made its custom and profits larger than other companies. Had even their own adherents believed in the system, the speculation would have had a longer existence. But I am sure they feel in their hearts, that in spite of overdrugging, in spite of the frequent aggravation of disease by empirical prescribers, in spite of the ignorance of the best of us and the idleness of the worst, there still resides in our profession a great power of prolonging on the whole human life, and that with all our faults we really exercise that god-like privilege.

I am sure that we should gain for our profession that public confidence which it deserves as guardian of man's material nature, if we were to place in their due position those principles which I have called the Rational System, and really and earnestly constitute them the trusted guides to treatment. I do not say the only guides, but the most honoured and trusted. We must openly and

* As medical practitioners we are not often able to enquire into the motives of the adherents of the ingenious mystery above alluded to, and I have felt very glad of the opportunity afforded by examinations for insurance. On these occasions people are so properly impressed with the feeling that any deception will violate their policy, that their statements may be implicitly accepted.

professedly put the parts of the treatment suggested by physiological knowledge in the foremost rank, and in the second that which has the recommendation of tradition alone. By this means only can we expect to hold our own as a liberal and scientific profession.

It may be remarked, that I have not expressed a hope or wish of acting quite independently of empiricism. In some cases accident has hit upon a mode of cure which physiology, in the present state of the science, would never have invented. A specific remedy for a specific disease is not wholly a day-dream of Lord Bacon's, although in his time none had been discovered. Where it exists, it certainly owes nothing to the anticipations of science. But how rare are the instances which can be cited ! Quinine and arsenic for ague, vaccination for small-pox, iodide of potassium for syphilis, and sulphur for itch, is the longest list that can be made of true specifics. And now mark—the real effect of the remedy in these cases is not to check the morbid acts of the sickly body, not to counteract the disease, but to destroy its material cause. In the last instance, you can see in a microscope that which the specific acts upon ; in the second and third, you can carry it in a liquid ; in the first, you can locate it in a certain district, and trace its obedience to the laws of gravity. There is a real *materies morbi* to be destroyed. So that there is every reason for looking upon these as examples of chemical destruction of a poison, or of that which is capable of nurturing a poison—of annihilation of the enemy or of its strongholds—as antidotes rather than as medicines,—*i.e.*, as removing the external cause of the disease rather than as curing it.

And here I would note that the few last observations

may hint to us in what cases to encourage the search for specifics, and in what to avoid it. Man's intellect may reasonably labour to discover them against such human afflictions as have for their cause a material ponderable substance, but against others he will look for them in vain. Those of us who are sanguine may hope for specific antidotes to keep off contagious fevers, epidemics, hydrophobia, glanders, gonorrhœa, where the cause of the disease exists *out* of the body as much as arsenic or any other poison exists *out* of the body; but it is simply irrational to talk of them in consumption, heart-complaint, albuminuria, dropsy, piles, indigestion, and others where the disease is *in* the body. And, be it remarked, that these latter cases constitute nine-tenths of the patients we are called upon to treat.

But even in the rare cases where there is a real specific disease with a real specific remedy the Rational System is not thrown wholly out of court, and the rational physician will always have an advantage. A very short medical life shows an unprejudiced mind that all cases of ague, for example, all cases of syphilis or of itch, are not alike, indeed that scarcely two are exactly alike, in spite of the unity of the cause; and these variations will sometimes render the specific treatment less applicable than usual, and require it to be modified to suit the individual. Here physiology must be our guide to success, for empirical deduction, however extensive, must fail us.

Some persons demur to the Rational or Physiological system as a ground of faith in medicine, because it does not give them a creed long enough, and does not explain or justify modes of treatment to which they have been accustomed. Now, if any of their habitual treatment is decidedly

opposed to physiological teaching, I would strongly urge upon these objectors the propriety of trying in several cases whether the patients would not quicker get well without it. Where not opposed, but merely not explicable on rational grounds, there is no reason to surrender it, and hope may be felt that the future course of science may show a connexion between the two. But, even then, I think strictly Rational treatment ought to be joined to the traditional, and be made the most prominent in our injunctions to the patient.

Remember, I do not say that treatment of which no physiological explanation can be given, is to be thrown aside or ridiculed. Far from it—the wisest man has always been the most conscious of his ignorance, and the most ready to confess it; the most practical man is always the first to act on slight motives, when no stronger ones are to be had. It is unpardonable in a medical man who has had the run of the wards of a large hospital, to be unacquainted with the traditional treatment; by all means let him use it till something better dawn upon him. Let us use everything; but let us acknowledge that we do so because we know no better; and let us take advantage of the first suggestion of that which is better. Let us do our best that there should no longer attach to educated persons the reproach that the unseen, mysterious, and unknown, is more trusted than the clear and obvious;* which it is, when the traditional, or empirical, or specific treatment is preferred to the rational.

In no cases is attention to the simple matters of diet and discipline ever thrown away. However much

* Communi enim sit vitio naturæ, ut invisis latitantibus et incognitis rebus majis confidamus.—*Cæsar de Bello Civili*, ii. 4.

our diagnosis may be at fault, or however difficult it may be to see any rational reason for prescribing drugs, the indirect treatment of attention to hygiene is never out of season; and, if made a matter of earnest study, will often be seen to effect a cure before we have found a name for the disease.

What the application of mere shrewdness to diet and discipline may effect even without the help of true science shows what might be done with its help. The strength of various kinds of quackeries consists in making patients leave off ordinary drugs, while they obtain the full benefit of rest, food, exercise, and amusement, and follow some harmless plan of treatment. The success astonishes even physiologists, makes converts of some half-educated, illogical medical men, and ought not to be without its lesson for us all. Why should the use of these powerful agents be left so much in the hands of those whose knowledge we are apt to despise? Why should an unfortunate patient be obliged to go through the form of drinking a mineral water, or submitting to a course of Kinesopathy, Homœopathy, Grape cure, or Water cure, in order to have the advantage of society without dissipation, wholesome diet, rest, and fine scenery? When fairly started, I am sure that a Rational Establishment would answer better, in a commercial point of view, than a Hydropathic, and its founder would have the satisfaction of achieving a victory for honesty and common-sense.

But even as regards drugs strictly so called, the quiver of the Rational physician is not to be supposed empty. He uses indeed few arrows, and generally one at a time; but he knows them well, and takes care that they hit the mark. And just at the present time his strength is being enor-

mously increased by the researches of self-denying philosophers throughout Europe.

The most complete examples of the right method of furnishing the weapons of the Rational physician are the labours of Dr. Böcker, investigating the actions on the body of alcohol, water, wine, beer, sugar, tea, coffee, antimony, senega, colchicum, belladonna, muriate of ammonia, acetate of potass, and sulphur. He is not content, as the pharmacist is, to observe roughly the general result of the re-agent, and then to set it down as a "stimulant," or a "purgative," or "expectorant," or "alterative." But he puts the body under a lengthened course of the agent, and then brings all the resources of chemistry to bear in observing what changes under its influence take place in the urine and its several components, the fæces, the perspiration; how the excretion of carbonic acid from the lungs is affected; how much nutriment, solid and liquid, is fixed in the tissues, and how much they are wasted; taking nothing for granted, and testing everything by the balance. And these observations, be it observed, are made on the body in perfect health, and under doses of the medicine not sufficient to disturb that health, so that its genuine reaction may be made to appear.

As an instance of the value of this method of accurate investigation to practical medicine, take his experiments on alcohol and wine, of the arguments and deductions from which I will give a short sketch as a model.

You are aware that the animal body is, during the whole of its life, in a continuous state of change; that its worn-out particles are every moment being removed in the shape of excretions,—gaseous and watery excretions from the lungs, watery and soluble excretions from the kidneys, inso-

luble from the bowels; and that new particles are every moment added, extracted from the food we eat. The perfect health of a full-grown individual is the exact balance of this income and outlay, and the most robust health is the maximum of both—when the man gets a good deal and spends a good deal. Now Dr. Böcker shows by careful experiment that the effect of alcohol, alcoholized liquids, and several other articles, is to stop the removal of the tissues, to arrest the “moultling” of the body. The urine was lessened by nearly half of its average quantity, and the solid constituents of it to the same extent; the most strikingly lessened of all being the urea, the peculiar product of life. The excretion of carbon by the lungs was remarkably defective, and, at the same time, the excretions of neither the bowels nor the skin were compensating for the deficiency. The effect, therefore, of alcohol is to diminish the vigour of that part of animal life which consists in the removal of worn-out flesh.

What, now, is the deduction from this as to its use by the physician? Of course that he should use it when the outlay exceeds the supply, when the destruction of the body by excretion exceeds what it is possible to replace by nutriment, and so to restore the balance called health. And that this is equally proper, whether the loss of balance consists in the supply being deficient, or the expenditure increased. Under opposite circumstances it must as obviously do harm.

Now take this as a guide in practice, and see the result. We learn, traditionally and roughly, that wine is good in low fevers, in anaemia or weakness, and in consumption. And we learn true enough; for it is beneficial in nearly all cases of the first, in most of the second, and a great many

of the last. But is it not valuable knowledge to be able to predict the exceptions, and so to avoid them? Dr. Böcker's deductions lead us to expect that wine would be useful in those cases of fever where no nutriment is assimilated, while yet the kidneys and the bowels are rapidly removing the particles of the body; but that it would be hurtful where they are not doing so to the extent of the ingestion of food. Practical experience fully bears out this rule. Again, in anaemia: where it arises from the deranged digestive organs not taking up a proper supply of food, however much may be eaten, while at the same time the urine shows that destruction is going on by keeping up its specific gravity, and the bowels excrete their full quantity, then wine is beneficial; but let hysteria be added, when the watery urine and the scanty faeces show that destruction is not rapid, and wine does harm. So also in consumption, where night sweats and diarrhoea are exhausting the patient, wine will arrest the destruction that is taking place; but if the metamorphoses are sluggish, it increases the mischief. I might continue till midnight instancing the deductions which the practising physician may draw from series of observations such as these; but I think what I have cited is sufficient to illustrate my meaning.

Let it not be supposed that the experimenter I have quoted is the only one who has entered on the path to this fertile land. Several in his own country have made investigations on exactly the same plan. Drs. Duchek, Julius Lehmann, Guleke, Bischoff, and others; in France, MM. Boussingault and Poggiale are the first names that occur to me; in England, the observations of Dr. Parkes on caustic potass, of Dr. Garrod on carbonate of potass, and of our own colleague, Dr. Jones on the influence of several

drugs on the liver, are perhaps the best examples. The sooner we see evidences of perseverance in this course the better for the world and the more honourable for England.

It is sometimes rather captiously argued that these accurate experimenters, to whom I assert we owe so much, do not show themselves the most efficient medical men, and therefore can claim no praise or thanks. Now, in the first place, this is not universally true; and if it were, would not be a conclusive argument. For is it not a fact that the most inventive and suggestive minds are often the weakest in applying their discoveries? Is not this shown by every chapter in the history of inventions, from Friar Bacon compounding gunpowder and constructing the camera obscura in his unknown study at Oxford, to Mr. Cort enriching England by his suggested improvements in the manufacture of iron, and dying poor? So it has been, and so it will be probably to the world's end. Only let us, less gifted, less exalted, but not less necessary applicers of this science, remember to acknowledge the source through which it has come, and give honour where honour is due.

Lastly, I would thus recapitulate what seem to me the duties of all in respect of Rational Medicine. To non-professional persons I would say, see and believe that the Art of Healing is a true thing, not a set of rules, or a doctrine, but a real means of adding to life and happiness. See—for you can see if you like—that it may have a foundation, not on opinion or traditional notions, but on certain knowledge of God's works. And be assured that not mere shrewdness or knack, or habit learnt from others, can be the chief virtues of the professors of this art. There is scope in it for the highest and broadest intellects,

for thought, work, and earnestness, for wisdom, prudence, and judgment, as well as for the moral virtues of perseverance and charity. He in our profession who is first in the scale of humanity is the first and best physician.

To the student, I would repeat what I have before urged, as to making Physiology the key-stone and the connecting link of all his knowledge, and the arched foundation on which he builds his future practice.

On the practitioner I would urge the importance of having firm faith in what he is about ; without this he can have no conscientious pleasure in the performance of his duties, his moral nature will deteriorate, he will probably be slighted and despised, and worse than that, he will deserve it. The sooner he leaves our profession the better. He that complains of the want of something to believe in, I am sure has not looked for it.

All, I would call upon to remember what a high matter it is that we take upon ourselves to handle. Man's life ! That which holds together his soul and body—which makes him God's viceroy on earth ; for without it he becomes but dust and spirit, and works no more in his high office ! Every minute that we enable him to retain it in vigour, gives him a fresh hope of working out his salvation ; every minute by which it is diminished damps that hope. Ours is truly an awful trust, and what I say to you is a motto that is present with me by night and by day :—“ Be earnest, be earnest, be earnest.”